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Stašys R.,  
Professor,  
Klaipėda University,  
Klaipėda, Lithuania

Žegunis K.,  
Doctorant,  
Klaipėda University,  
Klaipėda, Lithuania

## THE INCENTIVES FOR THE RATIONAL USE OF THE HEALTHCARE SERVICES IN LITHUANIA

**Summary.** *The longer life expectancy and the increased overall number of the non-communicable diseases is one of the main challenges of the health care systems in European Union countries. The early diagnostics and the control of the non-communicable diseases in the primary level may help to reduce the costs of the health care system and to increase the efficiency of the health care management [8].*

*The overall objective of the article is to analyse the health services utilisation data, and to offer the advanced model of health services delivery for selected non-communicable diseases conditions, which based on international evidence have potential to be successfully managed and decrease burden for secondary and tertiary health care levels. Data on health services utilisation are obtained from database of Klaipėda Regional Patient Fund. For the purpose of this research Health Research and Innovation Scientific Centre of the Faculty of Health Sciences, Klaipėda University received data on all outpatient visits to the primary, secondary and tertiary level during the period 2012 – 2015 of all patients enlisted to the Primary health care institutions working under agreement with Klaipėda territorial patient fund. The initial objective was to collect, analyse and summarise the statistic data provided by Klaipėda Regional Patient Fund, focusing Diabetes mellitus which according World health Organisation is one of the most common ambulatory care sensitive chronic conditions and proper management at a primary health care level lead to reduced hospitalisations because of the diabetes mellitus complications.*

**Key words:** *National Government Expenditures and Health, Health general, Health Behavior, Analysis of Health Care Markets, Public health.*

*JEL codes: H51, I10, I12, I11, I18.*

**The role of Primary health care in the management of the noncommunicable diseases.** Incentives of the efficient health care services in Lithuania is major challenge for the Lithuanian health care system. Still much

of the health care services are provided in secondary or tertiary level bypassing the primary healthcare level. This situation leads to increasing waiting time for out-patient secondary and tertiary health care and contributes to increasing overall health care expenses.

Different studies and discussions indicate that primary healthcare (PHC) level is not enough supported and controlled [11]. Patients still have the thinking that their conditions can be managed more efficiently in the secondary level. Though it is proved that most of the non-communicable diseases (NCD's) cases can be diagnosed, managed and controlled in the PHC level [7]. The policy makers should find the more efficient ways of the communication with the community members and PHC physician to encourage the collaboration [9]. The policy makers agree that the support and extra funding of the primary sector and community education is needed. NCD's related health needs are very comprehensive and multidimensional - degree of illness and decisions regarding his/her health and health care depend on biomedical, social, psychological, cultural domains. Patient awareness about the early diagnostics and control of the NCD's including the diabetes mellitus (DM) management is one of the main factors in prevention of the complications and the need of the hospitalisation [1]. Traditional disease oriented and hospital based models of health service delivery have to be changed to more holistic, community based and people centred health care models. People centred health services at a primary health care level should be integrated with social care services, other community services (horizontal integration), and also with specialised services (vertical integration) that in the best way to address health needs of all individuals in the community [3]. Health service delivery practices have to be standardised based on international evidence and accounting local circumstances and supported by clinical guidelines and protocols. There should be optimal care pathways for patients, well accounting individual health needs and avoiding duplication and/or inappropriate use of services. Therefore despite integration with narrow specialised services, when needed, primary health care professionals should be well organised to act as first contacts within health care system and guarantee continuous and coordinated care for the whole population they serve [5]. Therefore a well facilitated information exchange processes across different levels of care has to be established.

**The economic burden of the noncommunicable diseases management.** Non-communicable diseases, such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes, are the leading cause of mortality in the world 40 million of the 56 million global deaths in 2015 were due to NCD's, 80% of premature heart disease, stroke and diabetes can be prevented [12]. According the international association of diabetes, approximately 415 million adults have diabetes; by 2040 this will rise to 642 million. The greatest number of people with diabetes are between 40 and 59 years of age. The more important fact is that 1 in 2 (46%) people with diabetes are undiagnosed [10]. Diabetes caused at least EUR 619 billion dollars in

health expenditure in 2015 – 12% of total spending on adults. The average health expenditure per capita in was EU 2781 EUR [12]. The increasing economic burden is one of the main challenge for the health care systems [2]. The expenses spend on patients in different health care levels differs significantly. The table 1 shows the average expenses in secondary and tertiary levels.

Table 1

**Average expenses of healthcare services in secondary and tertiary levels in Lithuania**

Average hospitalization expenses per day	537 EUR
Consultation in secondary level	15.76 EUR
Consultations in tertiary level	29.05 EUR
Consultation in secondary level plus procedure manipulation	21.93 EUR
Consultation in tertiary level plus procedure manipulation	38.66 EUR

Source: Lithuanian State patient fund

The expenses for the healthcare services in primary healthcare level compared to secondary and tertiary levels differ significantly. The data is shown in table number 2.

Table 2

**The average expenses on patients in primary health care in Lithuania**

	Expenses for one patient per year in the primary healthcare level						
	Patient age						
	<1 year	1–4 year	5–6 year	7–17 year	18–49 year	50–65 year	> 65 year
Primary healthcare services (excluding odontology and psychiatry)	106,53 EUR	60,91 EUR	46,66 EUR	31,11 EUR	21,86 EUR	34,52 EUR	40,13 EUR

Source: Lithuanian State patient fund

Summarising the data it should be noted that improved health of community should be end result of well-organised and systematically managed health services. Therefore should be well monitored intermediate results of care and systematically examined clinical processes through strong clinical governance. The early diagnostics and the control of the NCD's in the primary level may help to increase the number of avoidable hospitalisations, reduce the costs of the health care system and to increase the efficiency of the health care management [4]. The NCD's management should focus on:

1. Primary healthcare,
2. Strengthening the role of nurses,

3. Enhancing the teamwork,
4. Finding synergies with public health and social care,
5. Promote patients centred medicine,
6. Strengthen patient's responsibility.

The focus on primary healthcare would allow to [6]:

1. Increase the number of the avoidable hospitalisations,
2. Decrease the number of undiagnosed or/and late diagnosed cases of NCD's which lead to hospitalisation,
3. Reduce the costs of the health care system and to increase the efficiency of the health care management.

**Objective of the study.** The statistic data of the diabetes mellitus management in Klaipeda region and the analysis of the compared and contrasted numbers of visits to primary, secondary and tertiary health care for selected NCD's.

**Aim of the study.** To identify the strategies of the health care management that would allow to increase the effectiveness and efficiency of the health systems by reduction of the hospitalisation rate for ambulatory care sensitive diabetes mellitus conditions.

**Methods.** Study object were patients, with all type of DM listed in primary, secondary and tertiary health care institutions of Klaipeda region. Data of registered DM diagnoses and all visits to primary, secondary and tertiary health care institutions during year 2012 - 2015 were obtained from database of Klaipeda regional state patient fund.

The initial statistic information collected from the statistic base operated by Klaipeda regional patient fund showed the total number of all visits to the primary, secondary and tertiary level. Different health care disorders and healthcare management in different levels are difficult to be compared therefore according the world health organisation statistics the analysis of the most common non-communicable disease - Diabetes mellitus was selected. Statistical analysis had been made using SPSS 13.0 software for comparison of prevalence of chronic conditions and visits to primary and secondary healthcare of patients with chronic conditions listed to different types of PHC doctors.

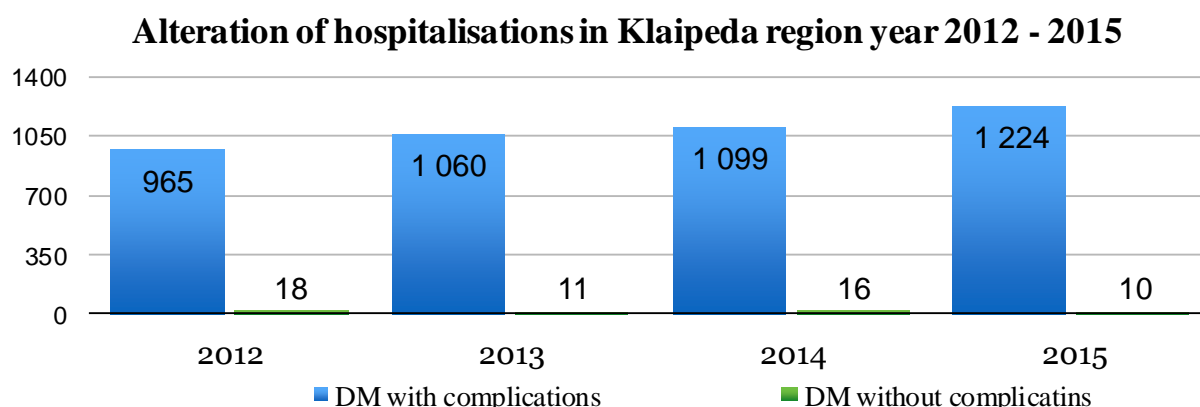
The total number of population in Klaipeda region was 324628. The total number of registered to the primary healthcare level was 407046. The gender distribution analysis show that 213859 of registered were females and 193187 men. The distinction between the population and the total number of registered to the primary healthcare level is determined by patients which have declared theirs residence outside the Klaipeda region.

**Results.** Diabetes mellitus can be successfully controlled in the primary level if the disease is diagnosed in time. Proper and duly procedures allow to avoid complications and lead to the higher percent of the avoidable hospitalisations. The statistics analysis show the high difference in the number of hospitalisations for the diabetes mellitus with complications and without complications. During the period of 2012 - 2012 there were registered 4 348

hospitalisations of patients with diabetes mellitus and just 55 case of diabetes mellitus early stages when complications are not identified.

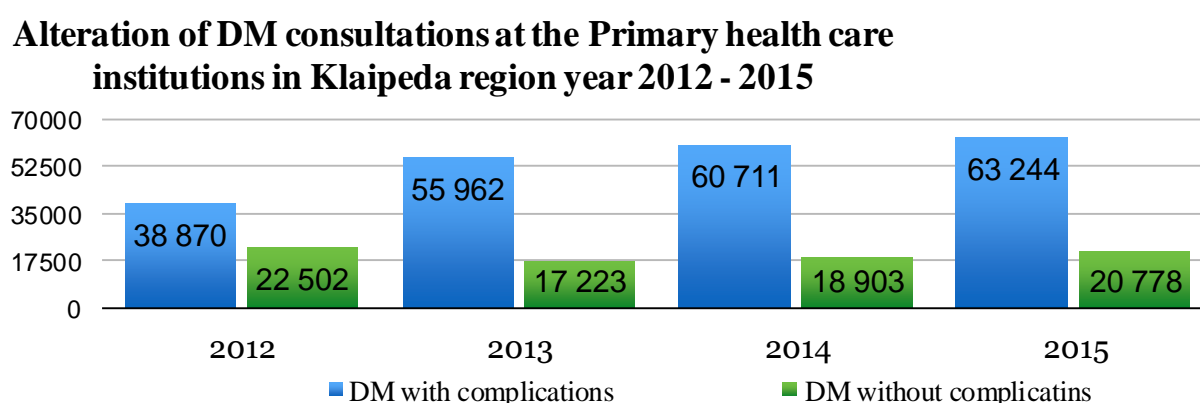
The effective control of diabetes mellitus in early stages may lead to a lower number of hospitalisations due to complications of this noncommunicable disease. The alteration of diabetes mellitus inpatient cases during the period of 2012 - 2015 shows the constant growth of patients diagnosed with the complications of diabetes mellitus (*figure 2*).

Figure 2



The findings confirm that undiagnosed or late diagnosed DM conditions increase the number of hospitalisations due to the diabetes mellitus complications. The *figure 3* shows the alteration of consultations due to DM at the primary health care level. The statistic shows the growing numbers of diagnosed DM complications. It may mean that patients are not informed or lack the responsibility to undergo the regular prophylactic consultations at the PHC level in order to avoid undiagnosed or late diagnosed conditions of DM which lead to severe complications and the need of the hospitalisation and the consultations at the secondary and tertiary level.

Figure 3



**Conclusions.** 1. Non communicable diseases are the leading cause of mortality in the world. The proper and duly control and management of the non-communicable diseases could reduce the number of the avoidable hospitalisations and mortality rate.

2. Avoidable hospitalisation reduce the costs of the health care system and to increase the efficiency of the health care management.

3. Most of the non-communicable diseases can be diagnosed in early stages. The actions that would help to increase the patient awareness should be implemented.

4. The analysis of the statistic information provided by Klaipeda regional patient fund show the increased number of the non-communicable diseases. The incidence of the diabetes mellitus was analysed. The data showed high number of late diagnosed diabetes mellitus with complications. Also data show high number of hospitalisations due to diabetes mellitus complications. It maybe stated that diabetes mellitus in Klaipeda region is not managed properly. Patient education and higher role of the primary healthcare in the management of non-communicable diseases including diabetes mellitus can help to reduce the costs of the healthcare budget.

**Acknowledgement.** The investigation of the statistic data was originally initiated by Klaipeda University and was mainly sponsored by Lund University. The overall objective of the project is to analyse the statistic data of Klaipeda Regional Patient Fund and to improve the efficiency of the medical services in primary, secondary and tertiary health care level.

This study is based on the statistic data provided by Klaipeda Regional Patient Fund. It displays the total number of insured citizens, number and indications of visits to the primary, secondary and tertiary level during the period 2012 - 2015. The study is focused on population, gender and age distribution, locality, number of hospitalisations, visits to the primary level and consultations in secondary level.

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Tsivtsivadze N.,  
PHD student,  
Business Administration Faculty,  
Sokhumi State University

## NEW PUBLIC MANAGEMENT (NPM) PARADIGM ON PUBLIC SECTOR REFORM IN CAUCASUS REGION

**Summary.** *This article is about the impact of the New Public Management (NPM) paradigm on public sector reform in Caucasus region. The main objective of the research is to explore the question of whether the three countries': Georgian, Azerbaijan and Armenian public sector reform belongs to the NPM paradigm. NPM was introduced during the 1980s and 1990s in some rich countries in order to replace the traditional model of public administration. However, for Caucasus Region the starting positions, the challenges, the capacity to change, and the initial objectives were quite different from most of the Western European countries.*

**Key words:** *NPM paradigm, Caucasus region, public sector, challenges, initial objectives.*

**Introduction.** For more than half a century, public administration reform has been an important task for the governments of both developed and developing countries. The latter have long and diverse experiences with the reformation of the public sector and frequently seek technical assistance in this field in order to improve the process of national development (UNDP, 2004). The attempts for public sector reform in developing countries started as early as the 19th century. However, because of the highly bureaucratic form and highly